



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,594	12/04/2003	Akira Gyoutoku	P24651	6999
7055	7590	04/05/2006		
			EXAMINER	
			PHAM, HAI CHI	
			ART UNIT	PAPER NUMBER
			2861	

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/726,594	GYOUTOKU ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Hai C. Pham	2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### **Status**

- 1) Responsive to communication(s) filed on 30 December 2005.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### **Disposition of Claims**

- 4) Claim(s) 7,9 and 21-41 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 7,9 and 21-36 is/are allowed.
- 6) Claim(s) 37,38 and 40 is/are rejected.
- 7) Claim(s) 39 and 41 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### **Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### **Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received:

#### **Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

**FINAL REJECTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nomura et al. (U.S. 6,949,849) in view of Estabrooks (U.S. 5,768,675).

Nomura et al. discloses an electrophotographic printer comprising a photosensitive member (photosensitive drum 20), a charger (charging means 22) configured to charge the photosensitive member, an exposer (image writing means 23) configured to irradiate the photosensitive member with light to form an electrostatic latent image, the exposer comprising an array of inorganic light emitting elements (63), a developer (developing means 24) configured to adhere toner to the photosensitive member to form a toner image of the electrostatic latent image, a transferor (intermediate transfer belt 16) configured to transfer the toner image formed on the photosensitive member onto a recording medium, a fixer (fixing unit 12) configured to fix the toner image transferred onto the recording medium, and a cooler (fan 7) configured to reduce heat applied by the fixer to the light emitting element array (col. 10, lines 7-25) (col. 15, lines 51-60).

Nomura et al. fails to disclose the exposer comprising organic electroluminescence elements.

Estabrooks discloses an electrophotographic printer whose writing unit (24) is preferably an LED exposure system, an organic electroluminescence EL optical system or the like (col. 14, lines 2-6).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide an organic electroluminescence exposure system to the device of Nomura et al. as taught by Estabrooks since Estabrooks teaches this to be known in the art to alternatively using either an inorganic LED or organic electroluminescence exposure system.

3. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nomura et al. in view of Estabrooks, as applied to claim 37 above, and further in view of Driessen-Olde Scheper et al. (U.S. 6,683,639).

Nomura et al. in view of Estabrooks discloses all the basic limitations of the claimed invention except for the amount of light irradiated from the organic electroluminescence element is larger than a predetermined value when cooled.

However, it is old and well known in the art that a high LED temperature results in a drop in light emission as evidenced by Driessen-Olde Scheper et al. at col. 1, lines 29-32.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to cool the writing unit of the device Nomura et al. as

taught by Driessen-Olde Scheper et al. for the purpose of preventing the light emission of the writing unit to drop to an unacceptable level.

4. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nomura et al. in view of Estabrooks, as applied to claim 37 above, and further in view of Hada (U.S. 6,218,660).

Nomura et al. in view of Estabrooks discloses all the basic limitations of the claimed invention except for the darkness of the toner image to be sensed.

Hada discloses an image forming apparatus including a calibration process to perform an image darkness control (AIDC) (step S530, Fig. 17) in which the toner darkness of the reference patches are detected by an AIDC sensor and the measured density is used to optimize the image darkness (col. 13, lines 27-34).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide a calibration process to perform an image darkness control (AIDC) to the device of Nomura et al. as taught by Hada. The motivation for doing so would have been to optimize the image darkness as suggested by Hada.

***Allowable Subject Matter***

5. Claims 7, 9, 21-36 are allowed.

6. Claims 39 and 41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nakayasu et al. (U.S. 6,366,304) discloses an image forming apparatus whose writing unit performance is affected by the thermal influence by radiant and conductive heat from a fixing unit.

***Response to Arguments***

8. Applicant's arguments with respect to claims 37-38 and 40 have been considered but are moot in view of the new grounds of rejection.

***Conclusion***

9. Applicant's amendment, which introduced new subject matters not originally claimed as well as a new independent claim with a different new scope, necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C. Pham whose telephone number is (571) 272-2260. The examiner can normally be reached on M-F 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



HAI PHAM  
PRIMARY EXAMINER

March 31, 2006